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The Impact of Fake News on Company Value: Evidence from Tesla and Galena Biopharma

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Table of Contents:

Abstract: In recent years, the dissemination of disinformation with an intent to deceive or mislead (i.e., fake news) has become more prevalent. Fake news is usually associated with fabrications surrounding factual or relevant information trying to be framed as either much more positive or much more negative than the reality of the truth would present. People often have ill intent and are looking for personal gain in some way, as their purpose for writing the misleading or false information and releasing it into the public. Over the last few years, the world has seen what feels like an explosion of fake news due to social media and technological advancements enabling news to be spread and accessed in a whole new way with no limits as to the different areas fake news is attempting to invade and affect. Fake news can potentially impact the social, political, and economic aspects of our world, and as the frequency of fake news continues to increase, it propels fake news more into the spotlight of public relevancy. The issue of fake or intentionally inaccurate news existing in the world has been around for ages, as many groups of people have tried to mislead or deceive others using misinformation. However, as the world becomes more and more interconnected and the accessibility to news becomes easier, it increases the potential effects and risks associated with fake news being spread. This paper is designed to analyze the risks and effects that can come from fake news in the business world and assess how big an impact or significance it can play in the performance of the financial markets.

To better understand the impact of fake news on company value, it is essential to understand the motives behind it while also considering the importance of fighting back against fake news and refuting misinformation. With the vast increase in the amount of news available, the relaxing of journalistic standards on what should be published, the shortening of the news cycle, and the development of new platforms for spreading news, fake news is now more prominent. In addition, these factors also raise the possibility that fake news can have a substantial impact on company value. Investors throughout the world now have to properly manage the threat of fake news and be constantly on guard against whether false or misleading information will alter or affect their everyday decisions in their work.

Creating and spreading inaccurate information has been around for centuries, and has always been an issue that people have had to deal with throughout time. The reason for the increased frequency and reach of fake news centers around how our news world has developed over time through technological advancements. Now people are able to access and share news in real-time throughout their daily lives basically no matter their location. This allows those spreading fake news to extend their reach and cause more damage. Social media has also created a platform for everyone to output news that has the potential to now go viral and reach millions of eyes. This new access to platforms is a positive development in a lot of ways for the world and people, but it does come with unintended consequences such as enabling the quantity and potential reach of fake news to increase drastically. Another issue that leads from this new issue at hand, is how people operating within financial markets can detect fake news in a timely manner while also being sure that they are in no way relying or making decisions dependent on the news with ill intent or fabrications. This thesis aims to dive into and explain the motives behind the new wave of fake news by analyzing specific examples while then analyzing how much damage could potentially be caused by successful fake news attempts. It is then essential to analyze the long term consequences that can result from fake news while also considering how companies and people can better combat fake news and look to quickly ward off potential attacks through proper responses and resulting actions. There is a need to tackle the complexity of the current issue of fake news in the financial world and consider the role it will play in future years while looking at what precautionary and reactionary decisions need to be made.

Introduction:

The development of social media platforms, as well as many other technological advancements in the news world, has made the world much more interconnected and has significantly changed the way financial information is accessed and used. The enhanced speed and quantity of news available has changed the climate for news in the financial world and has caused all people, including professionals, to adjust their methods of operation in financial markets. There have been many benefits stem from the development of news and media platforms such as lower information costs and less information asymmetry, but drawbacks and risks have also been added to the mix. These negatives mainly derive from the increased prevalence of fake news which now has a better chance of gaining traction and spreading before it is proven to be inaccurate. Fake news is at more of a disadvantage than real, accurate news, when it comes to the likelihood it is widely spread because anyone can publish false or misleading reports using social media.

Fake news is not a new tactic altogether, but as it becomes more difficult to detect fake news in real-time and stop the spreading of the misinformation. It was not long ago that major newspaper publications actually went to print with headlines that read that the wrong person, Thomas Dewey, had won the presidential election due to a confusion in tallying who won, resulting in some people being misinformed for days before figuring out the real truth and seeing the corrected results. Harry Truman was the actual winner and went on to become president and have the infamous photo taken of him holding a newspaper that read “Dewey Defeats Truman”. This is not an example of fake news that was intentional but still displays how much has changed in the spreading and availability of news which is why more people now have the ability to potentially create fake news stories that can cause consequences. Many professionals have been aware of this evolving threat for some time which is why there is an abundance of research and examples being written in academic journals and other pieces of writing in today's world. In this paper, the study will analyze the potential impact fake news can have while also detailing several other factors in fake news such as how it can be detected and combatted in the financial markets to mitigate the risk of deceitful news sources. The actual impact of fake news is something that is tough to measure in financial markets and investors' reliance and reaction to fake news is not well documented. As time progresses and fake news creators look to create a more substantial impact on the markets, it will fall onto regulatory bodies such as the Securities and Exchange Commission (SEC) and industry professionals to be aware and alert of potential reliance and usage of fake news, and be ready to respond with proper punishments and repercussions that dissuade potential fake news creators in the business world to strive for fair financial markets.

This is why this issue has become such a popular and debated topic currently which has led to many studies in this field. The research and studies that exist on fake news are not all aligned, and the overall narrative is disagreed upon by many researchers which is why this paper focuses on a broad range of studies completed to attempt to touch on multiple narratives and opinions of fake news in today's financial world In this paper, I first perform an overview of academic research related to fake news, and then move into analyzing specific cases and instances of fake news considering the potential main causes and effects of each situation. The paper will then shift into an overall analysis of the current climate of fake news and lays out conclusions drawn from the research on how companies can best take preventive and reactive actions to mitigate the potential impact fake news can generate in the financial markets.

Review of Literature:

This section outlines existing research and provides evidence of the impact of fake news. This paper draws from many different sources of information to provide context and will go into further detail on the cases and examples analyzed for the purpose of this research paper. There have been extensive discussions on fake news in the political world in current times as most people have read about the potential Russian interference in the 2016 US presidential election and how fake news was a tactic used on Facebook to potentially alter opinions. What is discussed less, is the potential for financial effects that can stem from fake news. Just in the example mentioned alone, it is easy to see the potential financial threat of fake news as an FBN analyst was cited to have described the news becoming public that Russia used Facebook for the spread of misinformation on the 2016 election as, "the straw that broke the camel's back," that led to a 4.5% decrease in Facebook's stock price on a Monday of trading (Deagon 2017). This is an example of fake news reaching the financial market and playing a role that is not warranted. I start with this example to show the connection between the more talked about political aspects of fake news and how it can lead to financial repercussions.

There are plenty of other examples that are not politically derived where instances can be seen of fake news playing a role in financial markets. A J.P. Morgan Chase quant, Marko Kolanovic, supports the idea of fake news having a negative impact in the financial world and stresses the potential threat. He describes fake news as to blame for the increased volatility of the markets and cites political groups, analysts and others as "amplifying negative headlines to sow discord and erode faith in markets" (Son 2018). He is not alone in his blaming of fake news as many researchers are also supporting the claim of the importance fake news has played in several specific examples of financial markets being swayed. This thesis will look at more specific examples that fall under this category found in the research for this paper.

The financial markets as a whole can be greatly altered if a fake news story gains enough traction and is widely spread and believed, which causes the potential for a great threat. This has been evident all the way back to 2013 when the official Associated Press Twitter account tweeted about two explosions injuring President Barack Obama. In minutes over $130 billion in stock value was lost, yet soon after it was realized that the account had been hacked (Cheo 2018). This demonstrates the amount of damage that can be done with fake news that becomes widely believed right upon creation.

As the news media climate has evolved over recent years and the speed and frequency of news is stressed more than the validity and accuracy of that news, trends are developing where there is a lower initial instinct to distrust information or be skeptical even though most people are aware of the existence of fake news. However, this is a bit of a unique example as in this case the reputation of the Associated Press itself contributed to the fake news reach rather than it having to spread and reach consumers on its own.

An example of another platform being manipulated to spread fake news is discussed in an academic journal where they tackle fake news articles uploaded to the website Seeking Alpha. In this case, the issue is that the website's editors are not able to identify fake news articles. The SEC labeled many different articles as false or inaccurate saying that they were uploaded with the intent to mislead and drive a stock price in a certain direction. There were other sites used for fake news, but the SEC claimed the vast majority were being uploaded on Seeking Alpha with the intention of affecting the markets in their favor. The journal outlines that after their study they were able to conclude that fake news articles generated 83.4% more-page views than legitimate articles. The study also came to the conclusion that the attempted use of fake news on this website resulted in "widespread implications" in the financial markets in the short term (Clarke et al 2019). The academic journal also looks at social media at the effects it can have in exacerbating or enabling the spread of fake news. The paper stresses the criticisms social media platforms have faced in dealing with fake news and even sometimes being accused of promoting articles that are later found to be false or misleading. This will be a controversial topic for social media in the coming years as people look for who to blame for the spreading of news intended to be manipulative. The journal goes onto to later say that their findings would be useful to social media platforms to draw from and institute a machine learning approach in attempting to properly identify and then handle fake news (Clarke et al 2019). If social media platforms can successfully implement technology that will accurately identify fake news posts, then this would go a long way in raising their reputation and putting themselves in a safer position to stay out of the public light for spreading misleading news.

Marina Niessner (2019) also touches on the event discussed above in a Yale Insights publication. The writer outlines how the SEC has gone on record to announce that they are aware of PR firms paying writers to write positive pieces on their companies and publish them on investment websites to aid their stock price (Niessner). This is a clear example of manipulation and using fake news for personal gain for companies which opens more questions and new issues. This puts a premium on detecting fake news and the need for developing technology with the capability to recognize and alert people about potentially fake news with a motive. In the Yale Insight article, Marina Niessner continues to discuss fake news as she details other consequences from the use of fake news. She is quoted as writing, "The study suggests that fake news comes with a large cost not just for financial markets but for society in general. A lack of trust in real news is a big problem."

It is easy to see how fake news finding its way into news sources starts to blur the line of the validity in news and starts to make consumers distrust and resent certain news outlets or news in general. This has many implications as people begin to struggle with what sources to trust or where to find information that is acceptable on which to base important financial decisions. Pump and dump schemes are not new to the financial world, but as fake news grows and becomes harder to detect, the effectiveness of these schemes is increasingly becoming a major problem . Dating back to 2015, there is another example outlined in the Washington Post where the SEC charged a Scottish Trader with securities fraud for false tweets about a semiconductor manufacturer and a medical research firm that were designed to cause sharp drops in the companies' stock price and in return making the individual tweeting the false tweets money. A similar outcome is also detailed in the article where a Canadian couple used their website to falsely inflate stock prices resulting in them making $2.4 million (Ferraro et al 2019). Examples like this are in abundance in today's world as so many people now have the potential to have a platform where they can spread a message.

This is an empowering feature of news media, but it is easy to see how this has translated to so many problems and led to so much manipulation of markets. An academic journal in the North American Journal of Economics and Finance performed a whole study focusing on the effects of fake news through hoaxes used to manipulate Twitter's stock price and found very telling information. Not only did the hoaxes affect the price, but the paper concludes that the traders aware of the hoax even adapted their work and preferred to trade in equity over option markets. The paper continues writing, “This result has implications for isolating informed trading around actual news events (Brigda et al 2017).

This is not the only example of someone stressing the implications of fake news as in an academic piece titled “Fake News: Evidence from Financial Markets” the writers’ detail how their study led to their conclusion that fake news also increases the abnormal trading volumes and changes stock prices temporarily, especially for small firms. This then had a “significant spillover” effect to all news as fake and true news were both now met with distrust on platforms found with fake news (Kogan et al 2019). This makes sense that consumers would start to develop distrust with news sources, but this brings about tougher conditions for news outlets. Fake news, as examples have shown, can be hard to detect in real-time and as people fail to detect it when it occurs, it only furthers the deterioration of the relationship between consumers and news outlets. This makes it much harder to operate in financial markets and causes great concern moving forward. The academic journal also discusses the impact social media and other forms of newer developing news platforms has made on fake news saying, “With the explosion of largely unmonitored shared information platforms, such as social media, blogs, and other crowd-sourced content, the potential influence of fake and biased news is a growing concern” (Kogan et al 2019). This ties in with almost all the research in this study as the effect social media and the changing news platforms has on the potential for misleading news is discussed throughout any conversations surrounding fake news in modern times.

The article continues on to discuss social media referencing the problems they have if they want to flag and make people aware of fake news on the platforms. It is a very delicate balance between shutting down the spreading of false stories on social media and limiting someone’s free speech and use of the platform. This brings many issues into play with how social media will fight fake news moving forward and how it will attempt to better identify misleading posts before they are widespread and cause damage. People, for the most part, are aware of these major issues surrounding fake news in social media, and the academic journal goes on to discuss how the distrust level in news in social media is higher and had less translation to normal media outlets that are more trusted. This will be a delicate balancing act for social media platforms to monitor fake news and its effects while keeping a platform that can be trusted and used by everyday people.

This is not to say that the distrust in news is only existent in social media platforms however, as there has never been a time like this in the news world where there is so much misinformation in existence that it leads to seeing people gaining advantages or altering decisions just because they are one of the people that is aware that a story is fabricated or slanted. In a separate study done on fake news, scholars stress the importance of having a deliberate mindset to properly deal with fake news. The study discusses the reliance on fake news and the change in that reliance as it starts to become apparent that the story was fake originally. This greatly influences people's decisions in financial markets with significant consequences which is why it becomes apparent the potential impact fake news can have and why it is essential to raise awareness and handle fake news accordingly (Grant et al 2019).

The financial industry is seeing financial professionals' habits and working styles change as fake news grows, demonstrating the threat it poses and attention it calls for to correct. I discussed these changes with a certified financial planner, not to be named, that stressed how much the fake news climate has altered the way he is able to do his job and the number of trusted sources of information. It also directly correlates to how financial professionals handle their clients, as they are always on guard against fake news or skeptical of decisions being made by these financial professionals while still being fooled by certain fake news stories that are not detected. There are so many dynamics to the development of fake news and all the different areas it affects that make it hard to understand the full impact. The next section of this paper will detail two unique instances of companies being involved in fake or misleading news, and case analysis will be performed to measure the impact and results that came from the individual examples.

Case Analysis:

In this section, there are two unique cases investigating the potential effects of fake news and the significance of the impact it can make on a stock price. The companies under observation for this analysis are Tesla, an automotive company, and Galena Biopharma, a small pharmaceutical company. The two companies are very different in size and in fields of operation which was done in an attempt to analyze fake news' potential effect no matter the size of the company or industry in question. The two cases also differ in terms of the tactics used, as the two cases analyze two different strategies used by people looking to manipulate the stock price. This paper will now begin diving into the situation that occurred with Galena Biopharma and how they were affected by an instance of fake news.

Galena Biopharma is a pharmaceutical company, like many other companies, believed that they had a strategy that would raise their stock price and lead them to financial gain. The strategy Galena Biopharma enacted was similar to other companies outlined in this paper and was a way to artificially inflate their stock price. Galena Biopharma decided to pay companies to write and promote so-called "independent analysis" articles of their firm that were then strategically placed in reputable online outlets such as Seeking Alpha, Forbes, and Motley Fool (Merle 2017). The company paid over $460,000 a month for these articles to be published and shared over an extended period of time around 2013 and 2014. The then CEO, Michael Ahn, was able to sell around 796,000 shares of Galena while it was in the phase of being artificially inflated leading to major profits for him personally (Keown 2017). The company was discovered by the SEC of paying for these positive analyses in an attempt to manipulate their stock price and has since settled with the SEC for an undisclosed amount while Michael Ahn was charged by the SEC. Looking at the effects of the articles, it is undetermined when the articles exactly began, but the study will analyze the stock price of Galena around the time period in question. As of August 12, 2013, Galena's stock price was around $55,555, but as 2013 progressed the stock price started to rise substantially. Galena reached its peak price around the middle of January when the price went over $210,000 showing substantial growth. This is around the time that the former CEO decided to sell his shares and gain such a large profit. By the middle of April Galena's stock price was back at 56,456 and leveled off or decreased for the rest of the year in 2014. As you can see, this was a pretty successful pump and dump scheme for Galena in the short term, but from the chart attached below it seems as though the scandal and charges brought by the SEC in the coming years were much more detrimental to Galena's stock price long term. This is the impact of fake news in today's world and the ability to create an opportunity to artificially inflate a company's stock price based on short term news. Even though the sites used to promote the articles were not in compliance and did not know of the scheme taking place, their site was still used as a way to exploit the market, as they were unable to identify or keep the manipulative articles from their sites. It is a positive to see that there are consequences for manipulation attempts such as this one, as the long-term future of Galena was put into jeopardy and negatively affected by the results of the scheme being found by the SEC as you can see in the chart below showing the long term changes in stock price. However, this still is a clear example of the danger posed in today's world through using the media to manipulate markets, and it is not the only example as the SEC charged dozens of other companies for using similar strategies and being effective in manipulating stock prices.

Figure 1 - Overview of Galena Biopharmas' Stock Price

The next example will look at is the automotive company Tesla, founded by the infamous Elon Musk. This example is vastly different than the previous, as Galena used fake news as a way to enact a pump and dump scheme while Tesla, in this case, is the victim of fake news. On January 7, the day before the CES 2019 convention which is described as a "Global Stage for Innovation" a video went viral on twitter over an incident surrounding Tesla. The video posted to Twitter by an account with the twitter handle of "@Shanghaijayin", which had an unknown owner, alleged to show a Tesla autonomous driving car crashing into a robot prototype at the CES convention (Atkinson 2019). The original tweet has since been deleted, but below is an attached tweet of a twitter user with the name "PromoBot" who also shared the video. It was not long before the video went viral and was surrounded by debates and scrutiny over self-driving cars the next day. The issue with this story is that it turned out that the video was completely fake. Tesla quickly refuted the video pointing out that they do not have a fully autonomous, self-driving, model yet and upon further investigation was able to prove that the video was faked.

Looking at the impact this example of fake news had on a major American company starts with detailing the price before the incident occurred. As you can see in the chart below also, Tesla's stock was showing an incremental increase in the days leading up to the event, but the day in question, in this case, is January 8. On this day, the stock price opened at around $341.96 per share, but then hit a low of $321.01 in the middle of the trading day before closing at a price of $335.35. It can be seen from the first chart that on this day that the video went viral on Twitter that there was a significant dip before the price corrected and went back to its previous trend of increasing. A large part of this is most likely due to Tesla's ability to quickly and obviously disprove the video and prove that it was faked. This brings into question though what would have happened if they were not able to disprove the video and if continued to go viral and influence stock price for more than a period of one day. Also, even with the quick correction from Tesla and the quick correction in stock price, the right investor with the right strategy in place could have still profited off the short downturn. I have also attached a second chart below showing the months before and after the tweet went viral which seems to show that the video had little impact in altering Tesla's value in the long run. It is only when the time period is broken down and analyzed by the period directly surrounding the event that the effects appear briefly. While this is the initial reaction and subsequent reversal happened quickly, financial markets are depended on to be accurate and fair all the time so even this small adjustment caused by the viral video raises concerns.

It is unsure whether this example was targeted at influencing Tesla's stock price or if there were other motives. Some people suggested that the timing and event that the video supposedly occurred leads them to believe that the video was designed to influence the public perception in general surrounding self-driving cars. Whether either option is true, it is still alarming seeing people intentionally deceive and create videos designed to spark a reaction using social media. No other platform published the video in a way that posed it as true which is surprising that it was still able to create national attention just from one twitter user. Social media platforms are becoming more involved all the time in the way people get their news and the number of people that use social media as a whole. The larger that number of users continues to grow in the future will only further the potential impact stories of this nature can have on stock prices and in business industries in general. The impact social media can have is changing and evolving every day as it is a platform were very little in terms of accountability and verifiability is required.

Figure 2 – Summary of Tesla's Stock Price

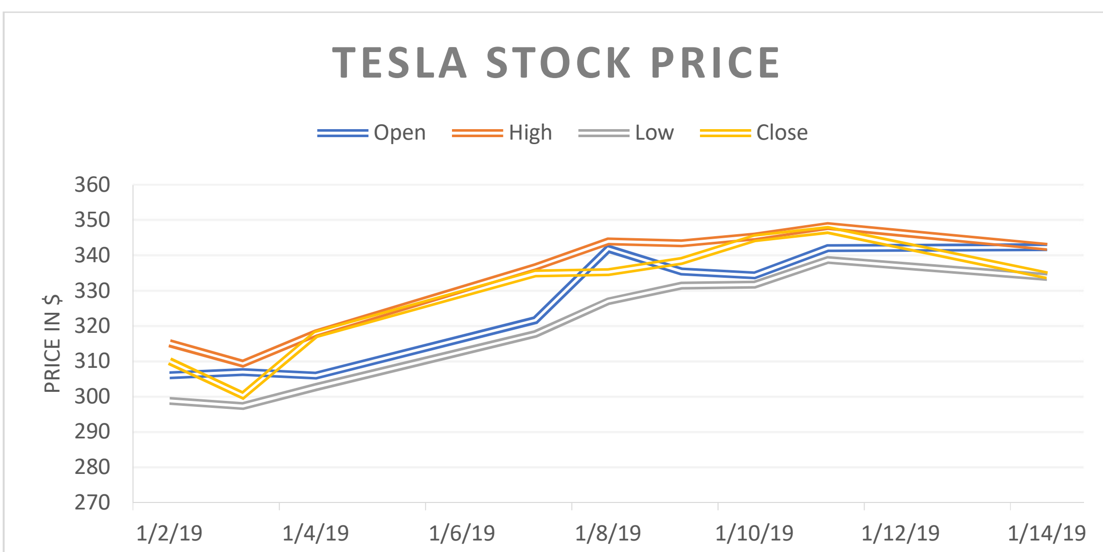


Figure 3 – Tesla's Stock Closing Stock Price Before and after the Fake News

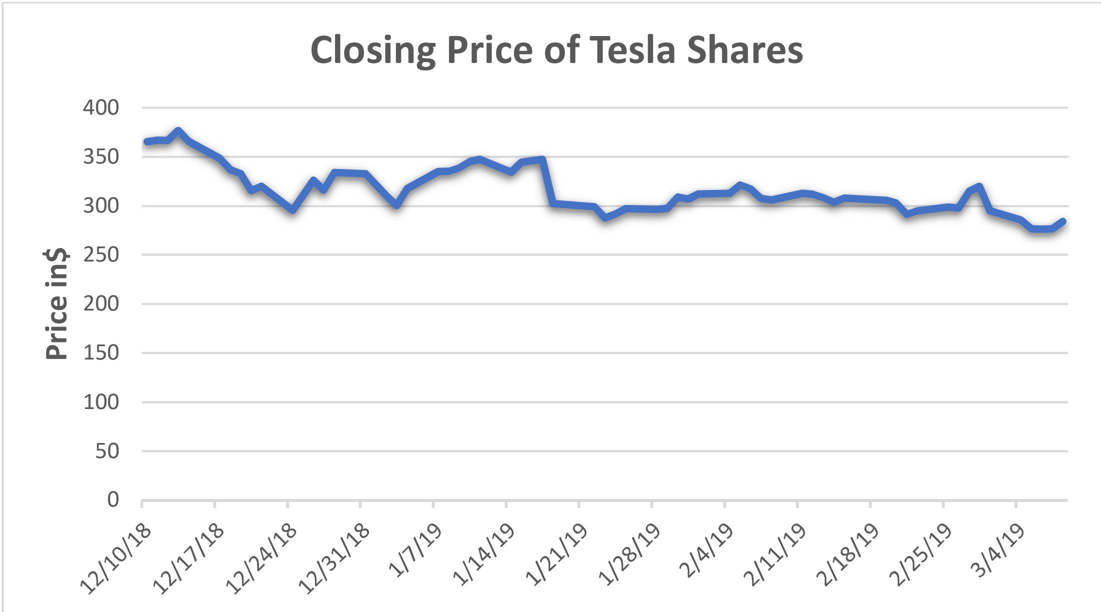
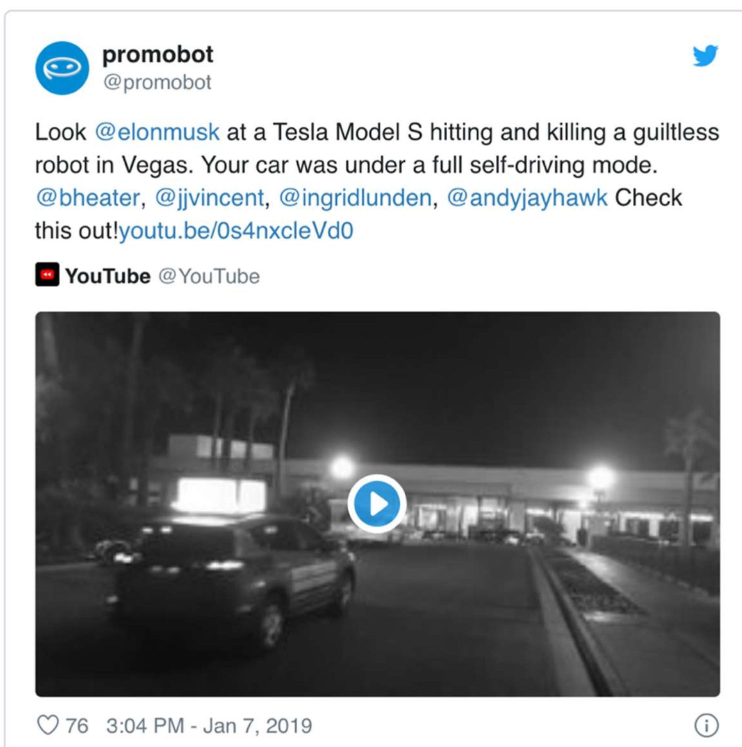


Figure 4 – Screenshot of a Secondary Source of the Fake News Tweet



Analyzing the two cases comparative to each other, there are very little in terms of similarities. Tesla was the victim of a fake news incident that negatively impacted their stock price but only for a brief period. They were able to effectively set the record straight and correct the deceitful video in a timely manner which resulted in their stock price not being affected by too significant of an amount. They also were the victim of using social media to spread fake news rather than actual online publications. Galena Biopharma was on the opposite side of a fake news scandal as they were the culprit and potential beneficiary. Galena capitalized on an opportunity that they thought they could exploit without being detected but was caught. This act of paying people to pretend to write supposed neutral analyses of the company is illegal as it is trading with knowledge not available to the public, and while the CEO was able to profit from the scheme, those involved were eventually caught and charged. It does bring into question whether others are participating in similar behaviors but not getting caught. This is likely to appear in most people's mind which is where the distrust in the news media in general starts to arise. As fake news continues to increase in frequency, it brings into question what people can trust, and what news sources are dependable and can be immune to publishing false or misleading news. Social media already has the reputation of users needing to be careful what they read and believe, but with fake news becoming more rampant, this trend could lead to news sources being approached with a similar mindset. The more people are able to be successful with similar schemes surrounding fake news, the more people will try to also manipulate financial markets in the future which is a cause for major concern for our financial industry. This paper will continue to discuss these issues moving forward in the next analysis section looking at the research as a whole.

Analysis of Research:

After sorting through the vast amount of information available for research on fake news in financial markets, and analyzing our two unique cases, certain predominant trends and threats emerge that stand out in terms of the threat level moving forward. In terms of the actual effects, fake news can cause on financial markets, it can be seen how the frequency of attempts at using misleading news in today's world demonstrates that at least the people guilty of creating the fake news believe it can be effective. There would not be such a drastic increase in the sheer volume of examples of people attempting to manipulate financial markets if the ones generating the inaccurate news were not sold on the effectiveness of this strategy. The world is seeing more cases all the time where people are committing crimes just through the generation of slanted news to achieve financial gain, which clearly shows that fake news is a big enough problem that it will have to be addressed and dealt with moving forward as technology and our world continue to progress. However, once it is clear that the trend is not going away on its own, the issue can move onto questioning how it can be addressed while also detailing the significance and potential impact it can have on the world.

The main concerns that start to become clear for the financial industry are how susceptible the markets can be to fake news and then asking why the current environment has become a place where fake news is so prevalent. Starting with the first concern, experts and professionals must consider how significant an impact fake news can potentially have on the financial world to understand the size of the threat they are facing. It is clear in our studies that most of the schemes and plans designed around fake news focus on trading or benefiting financially generally in the short term. It was discussed earlier how fake news generally diffuses faster than truthful news which can be a good aspect but can also be negative. What is happening is that people are generating stories, inaccurate and accurate, at such a high rate that the news cycle is shortening more all the time which is leading to multiple issues. First, some people are starting to feel like that the time it takes to disprove fake news stories is sometimes not worth the effort to refute it because of how quickly some of the stories will dissipate organically. An added concern can be that efforts to refute the misinformation can unintentionally extend its lifetime, thereby unintentionally giving it more credibility.

But with this mindset, more people are able to take advantage of the markets by just putting out article after article that may not be completely true or may contain fabrications. With the information overload, they can fly below the radar of experts who would be able to disprove their stories with facts. What this leads to is that people start to become distrustful of all news which is why the reputation of the national media is being called into question more frequently all the time. Now with the major issues identified of fake news stories mainly focusing on manipulating markets, benefitting the short term financially, while also creating distrust for all news, the issue can now move to start to address how these problems can be solved.

I do not believe from all the research and cases analyzed that fake news has a major effect in the financial markets over the long term as usually the facts come out and are proven and the market adjusts. However, people being able to manipulate in the short term is still a key problem. Professionals and all people participating in financial markets must be aware of the potential for fake news which leads back into the earlier academic journal that discussed how a deliberate mindset can help mitigate the effects of fake news. If users and consumers are aware of fake news and are more attentive to what sources they are getting their news from, then that is a good first step in validating the accuracy of news. It would also be a safeguard for people to be on the lookout for short term news that seems to be too shocking to be true.

However, I believe the main burden of this issue with fake news falls on professional news media outlets. The journalistic standard of accuracy with a commitment to balanced, non-sensationalized, presentation of issues over and above everything else in the news world has faded through the years. In today's world, competition pushes media outlets to be the first to print or report on a story without fact-checking, even when the truth has not been fully revealed. There are fewer and fewer corrections from news writers or media outlets which demonstrates how the faster turnover rate in the news world is chipping away at the accountability of the news sources. If someone writes a story that has implications in the financial markets, then they should have to put their name behind that piece of work and stand behind it even if it is later deemed to be inaccurate. If the reputation of someone is put on the line with each new story, then that greatly lowers the chances that they will fabricate or mislead. If people are more demanding of this type of news reporting, then it leads to news media being forced to respect each story and spend more time validating their work, knowing that if they do not then customers will go elsewhere for news. The number of reputable news sources that a person can bank on being accurate is falling every day as it is seen in the examples of how hacking and failure to identify fake news can lead to people being successful in misleading consumers causing a total distrust in news. Moving forward, society as a whole will have to combat this by being more demanding of news outlets and holding them accountable as this paper has discussed in this study.

Not all the blame is on the news sources though, as another question that arises with the issue of fake news is why people are so susceptible to fall for fake news. This issue was discussed in a New York Times article where it was stressed, "This is not just an academic debate; it has real implications for public policy" (Pennycook 2019). In the article, they look at multiple sides to the debated issue of why people fall for fake news but that it comes down to one aspect: reasoning. The article is quoted, “Our results strongly suggest that somehow cultivating or promoting our reasoning abilities should be part of the solution to the kinds of partisan misinformation that circulate in the media.”

In today’s world where the quality and reliability of the news have potentially been degraded, it becomes essential for constant reasoning from consumers. With social media and other platforms, the news can be so widely spread in such a short amount of time that even if there are unverified or outright false claims in a piece of news it can still impact many people who are not aware of the inaccuracy. This should lead individuals to be much more skeptical of news stories and induce them to search for ways to corroborate claims made, especially if they have financial implications. Behavior is also such a key determinant in achieving success in the financial markets and as I have spoken to professionals in the financial world that is where a lot of their concerns have gone because of fake news. The speed and prevalence of the news, good and bad, has made it easier to fall victim to fake news and shoot for short term gain causing detrimental effects to the long-term investment success. Especially as certain volatile events are happening, it is becoming more important for individuals to keep this deliberate mindset and attack news with skepticism and reason before letting emotion get the best of oneself and falling victim to manipulation.

As the future progresses, these will be the driving forces and factors in the news world and how it relates to the financial industry. There has never been a time where a shift was needed back to more meaningful journalistic principles, as well as the financial industry being aware of manipulation and combatting it through reason and looking for short term schemes using fake news and exposing them.

Conclusion:

Charlie Munger, a successful American investor and business partner to Warren Buffet, has a quote that I believe is very applicable to this issue of fake news in today's world and it says, "Show me the incentives and I will show you the outcome." Fake news has proven to be effective in the short term for people looking for financial gain by exploiting the current news climate. It is easy to see in the Galena Biopharma case how misleading and manipulative a company can be to make the news surrounding a company seems legitimate while being just an elaborate scheme, and it is known that there are many others looking to achieve similar benefits through the generation of misleading news. It is now time for adjustments and corrections to be made on both sides, from the news outlets and the consumers, to be aware and on guard for how to solve this problem.

Looking at the potential suggestions for solutions or ways to limit the risk of fake news, companies need to have preventative measures in place by maintaining active presences in social media and other developing news platforms where they are able to constantly be on guard against fake news instances that seek to cause them harm. If they are called into question or become the victims of fake news, then they must be ready to respond with counter-information refuting the claims. The amount of data that companies can store on their business is expanding all the time through some of these same technological advances that aid fake news. This should allow them to be in a better position to quickly asses their data on the issue in question and then respond in a timely and understandable way that keeps fake news from spreading to mass amounts of people. If companies and groups of people who are being targeted by fake news are able to explain the truth behind the story quickly and with real accurate data, then the misleading news will be much more likely to fade away which can drastically lower and mitigate the potential impact it could have on the company financially.

News sources must become more reliable and dependable in the accuracy of the news that is shared on their platforms, while consumers have to start doing a better job at corroborating their news and acting based on their findings. Social media is a major enabler to the fake news trend. One potential solution requires each person to become more responsible and aware of the existence of misleading news and become more selective on what is shared or what sources they use to make their investment decisions. This issue is not going away in the future as the news and financial world continue to develop and grow while more people gain a platform each day. The increased access to news and news platforms in everyday lives must be handled with respect and treated properly to enable people to receive the benefits of the new technology that is changing the news climate, but while also keeping intact the fairness of American institutions such as the financial markets.

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